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4912 E. FRANKLIN ROAD P.O. Box 1280 NAMPA, IDAHO 83653-1280  
TEL [208] 467-4424 FAX [208] 467-9987

October 27, 2008



US EPA Region 10  
Attn: PCS Data Entry Team  
1200 Sixth Avenue, OCE-133  
Seattle, WA 98101

Re: NPDES Permit # ID002803-7

Dear Sir or Madam:

This report is submitted to comply with the requirements of Part II.B Table 3 of the referenced permit. Please find attached:

1. Source Investigation
2. Receiving water fate and transport study
3. Report of Findings and Recommendations, which includes the results of our feasibility evaluation at this time and the efforts currently being made to meet the Schedule of Compliance for Total Phosphorus

In addition, Sorrento Lactalis, Inc. has contracted with Symbiont, 6737 West Washington Street, West Allis, WI 53214 to perform an independent engineering feasibility study on phosphorus removal optimization and expansion alternatives for phosphorus at our facility. Symbiont's report will be completed and submitted for your review by the first week in December 2008.

Sincerely,

Kurt Shaw  
Wastewater Manager  
Sorrento Lactalis, Inc.  
(208) 463-6610  
(208) 860-9487 Cell

Sorrento Lactalis, Inc.

Nampa, Idaho 83687

**Permit No.: ID-002803-7**

**Attachment 1 - Source Investigation of Total  
Phosphorus**

1. Forty-seven percent of total phosphorus loading to the wastewater treatment plant is from phosphoric-based cleaning chemicals, which generates approximately 33,364.67 lbs phosphorus on an annual basis. Data was provided from our bulk chemical supplier Ecolab Inc. Information was based on percentage of phosphorus per pound basis.
2. Another source of phosphorus is from cheese and whey production, equipment cleaning and small trace amounts from other sources. One liter of milk contains 1000 mg/l of phosphorus. Sorrento currently processes estimated 175,000,000 gallons of milk annually.
3. We are testing the well water for phosphorus as well. Our process lab has had test results as high as 0.07 mg/l on tap water using Hach test tube method 8190 on a DR-4000. We will test the well water at a certified lab and use EPA standard methods 365.4 to build a database on a monthly testing schedule.

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Attachment 2 - Receiving Water Fate And  
Transport Study  
Report of Findings

1. The wastewater treatment facility has an average discharge of 0.205 mg/l over the last thirty four months to the receiving water. Tests were done on daily and monthly biases. Test were completed by an outside certified lab using standard test method 365.4
2. Quarterly testing was preformed on the upstream of the receiving water with a total phosphorus of .274 mg/l. I would like to note that first quarter 2008 test showed total phosphorus at <0.05 mg/l and a Ortho phosphorus of 0.21 mg/l Ortho is part of total-phosphorus. I removed this sample from the average, with the sample in the average result of 0.239 mg/l total phosphorus. Testing was preformed by outside certified lab using standard method 365.4.
3. Quarterly samples were taken at Purdam drain into Mason creek with an average of 0.285 mg/l total phosphorus. The first quarter 2008 sample showed total phosphorus of <0.05 and Ortho phosphorus at 0.22 mg/l I feel this is a lab error and I removed it from the average. With sample in the average the results changed to 0.258 mg/l total-p. Test was preformed by outside lab using standard method 365.4.
4. Locations of sample points are Purdam Gulch Drain. Purdam Gulch Drain at Ustic Road & Sugar Factory. Outfall 001 at reairation cascade 16200 Star Road.
5. Report of finings.
  - A. In the last thirty four months discharge from Sorrento Lactalis, Inc. wastewater treatment plant has discharged total phosphorus levels below the receiving water levels.
  - B. With the increase of Phosphorus between the two sample points there are other contributing sources of loading, aquaculture, industrial or other.
  - C. Sorrento Lactalis, Inc. is putting grate efforts in to maximizing the performance of the equipment that is in place to reduce total phosphorus that is discharged from outfall 001. We will continue to research new technology and process in phosphorus removal .
  - D. We have contracted an outside engineering firm to perform an evaluation of are current operation and process.
  - E. We are working with are chemical suppliers for alternative products with no or reduced phosphorus.



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## Attachment 3 - Report of Findings and Recommendations

1. The wastewater treatment facility has achieved the 0.07 mg/l total phosphorus limits with current equipment and processes, but only for short time periods. It only takes a small upset in loading or equipment performance to push the biological and chemical process above the 0.07 mg/l limit. In addition, the lb/day-loading limit is based upon no more than 500,000 gallons per day effluent. At higher flows, maintaining 0.07 mg/l phosphorus is not sufficient to meet the 0.29 lbs/day phosphorus.
2. Sorrento Lactalis, Inc. is working with our chemical suppliers to reduce the use of phosphorus-based cleaning chemicals where possible. This process is already under way and will continue until we can remove as much phosphorus from our cleaning process as possible. We will continue to research alternative chemicals that will give us the performance that is required for food safety.
3. Sorrento Lactalis, Inc. will be installing TOC/UV monitoring equipment in eight strategic locations in the production plant to help control loss of product in the drains. This project is due for completion the first quarter 2009 at an estimated cost of \$150,000.00. Although primarily a process control to control product losses, it also assists us in phosphorus removal since a single liter of spilled milk contains 1000 mg/l phosphorus.
4. The Parkson D-2 system in the Sorrento Lactalis wastewater treatment plant is being modified in early November 2008 to optimize its performance as per the manufacture recommendations. The concentration of phosphorus in our clean, potable well water has reached 0.07 mg/l phosphorus in our wastewater treatment plant lab. A limit of 0.07 mg/l phosphorus in our effluent means that we must find a way to remove phosphorus using potable water that is already as high in phosphorus concentration as our limit. If we discharge more than 500,000 gallons of effluent at 0.07 mg/l (same as potable well water), we will exceed our loading limit of 0.29 lbs phosphorus/day (see #1).
5. The Wastewater treatment plant is in the process of reviewing all steps of phosphorus removal at the facility. We are working with Dr. Jenchie Wang, Process Engineer with Symbiont, 6737 West Washington Street, West Allis, WI 53214 to determine phosphorus removal alternatives and means to optimize our current phosphorus removal processes. His final report is due the first week of December 2008 and will be used to further evaluate the feasibility of reaching and maintaining the final Total Phosphorus limits in our NPDES permit.